



# **KULSEN & HENNIG DOMINIK KULSEN**

Nature's Brilliant Colours

## **The ABCs of Natural Fancy Coloured Diamonds**

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## Argyle & Antwerp



**Argyle** - The Argyle diamond mine in North West Australia is, or rather, was, the top source of pink diamonds. It is also known for its large yield of champagne coloured diamonds in the most beautiful shades of brown. The operator of the mine, Rio Tinto, has decided to close down the mine in the near future due to the ever-decreasing yield and the increasing costs of mining.

If you are interested in **champagne coloured diamonds** with a **certificate of origin** from the **Argyle mine**, please contact us!

**Antwerp** - This city was already a famous diamond centre as early as the 16th century. Although most diamonds today are cut in India, Antwerp is still considered the **capital of the world's diamond trade**. More than 80% of rough diamonds and 50% of cut diamonds pass through the Hoveniersstraat in Antwerp, where many global diamond traders can be found. And while this port city may be best known for its painters and fashion princes, it also has a lot to offer holiday travellers. In this lively seaport town you can, for example, follow in the footsteps of the baroque painter Peter Paul Rubens.

## Baby Blue or Baby Pink?



Did you know that up until about a 100 years ago, most people were completely unfamiliar with the idea of assigning a colour to a gender? It was only **at the beginning of the 20th century** that - and here it comes! - **pink** was introduced for boys and **blue** for girls. **The change in these colours** took place in the mid-1930s with the advent of new military uniforms, blue jeans, and worker's dungarees.

And not just pink and blue dyed clothes have been in fashion since then - the same is true for diamonds! A new **blue** or **pink diamond** is often purchased and worked into the original wedding ring to commemorate the birth of a son or daughter.

Natural **blue** coloured diamonds are among the rarest in the world. They get their colour from the chemical element boron, which is embedded in the crystal lattice during the creation of the diamond. Colour-treated blue diamonds get their colour afterwards through artificial, radioactive irradiation. In practice, these two can be distinguished as follows: Natural blue diamonds can conduct electricity, but irradiated, and thus treated, diamonds cannot!

**Pink** diamonds get their colour from the very high pressure and extreme heat found in the earth's interior which shift the levels of the carbon crystal lattice as the diamond is formed. Pink is also among the rarest diamond colours found in nature.

## The 4Cs - Colour, Cut, Clarity, Carat - and the 5th C



The 4 Cs - Colour, Cut, Clarity and Carat (weight) - are the quality characteristics that determine the value of a diamond.

**Colour:** Colourless diamonds are assigned letters ranging from D to Z. The letter "D" stands for the highest quality white colour level. From colour level I onwards, the stones have an increasing colour tone.

Natural Fancy Coloured Diamonds are given the prefix **Fancy** if they show a clearly visible colour. Example: *Fancy Yellow*

**Cut:** A diamond can only display its full brilliance when cut in the right proportions. It depends above all on the skill of the cutter who creates a masterpiece out of a rough diamond. A good cut brings out the fire of a diamond optimally: the light is reflected from one facet to another and shines back through the surface of the stone.

**Clarity:** Purity, the measure of the inclusions of a diamond, is evaluated by the visibility of these features under 10x magnification. In the case of Natural Fancy Coloured Diamonds, clarity is a less important consideration than the colour, as long as the inclusions do not affect the brilliance of the stone.

**Carat:** The weight of a diamond is indicated in carats. In the past, diamonds were weighed against the seeds of the carob tree, which weigh 0.2 grams per seed. This is the origin of today's unit of measurement: 1 carat = 0.2 grams.

The weight of diamonds in everyday use can also be given in points: one carat consists of 100 points, so the weight of a diamond of 50 points corresponds to 0.50 carats. Example: A one-point diamond equals 0.01 ct, a ten-point diamond 0.10 ct.

**The Fifth "C" - Confidence!** The purchase of a diamond and also the purchase of the piece of jewellery made with it is always a matter of trust. Despite the possibility of obtaining certificates, trust and expertise are essential to the diamond trade. This is especially true for coloured diamonds, which can have very different appearances. Anyone who is looking to make some easy money and gets involved with strangers in a seemingly unique and fast transaction usually experiences disillusionment.

## Deep & Dark



When grading Natural Fancy Coloured Diamonds, it is not just the colour that counts, but also the colour intensity.

In addition to the names for the colour gradations "**Faint**" (*barely visible*) – "**Very Light**" – "**Light**" – "**Fancy Light**" – "**Fancy**" – "**Fancy Intense**" – "**Fancy Vivid**" (*bright / lush*), there are also "**Fancy Deep**" and "**Fancy Dark**". The terms "**Deep**" and "**Dark**" are used when a diamond displays a rather dark and muted colour impression.

"Deep" is mainly used for diamonds that contain the colours yellow, orange, or green.

## Expertise & ExExEx



A **diamond expertise** (also called a certificate) is issued by a gemological institute or diamond expert after a thorough examination of the diamond. The expertise provides information about the authenticity and the quality features that determine identity and value.

The following institutes are internationally the best known and most recognised:

**GIA – Gemological Institute of America**

**IGI – International Gemological Institute**

**HRD – Hoge Raad voor Diamant**

### What does "ExExEx" or "Triple X" mean?

An ExExEx diamond or Triple X diamond is a brilliant cut diamond that has an **excellent cut**, **excellent symmetry**, and **excellent polish**. **X** is the abbreviation for **Excellent**. Triple X therefore means Triple Excellent. Such a diamond gives off maximum light and fire.

## Fluorescence



Whether or not a diamond exhibits fluorescence can only be determined under UV light in the dark.

Stones without fluorescence remain dark under UV light. The stronger the fluorescence of a diamond, the more it glows under UV light. Since UV rays are also contained in sunlight, the colour of fluorescent diamonds appears somewhat different under the influence of strong sunlight than under artificial light.

While colourless diamonds usually lose value through fluorescence, this is not always the case with coloured diamonds. Fluorescence can also be interesting, for example, when a yellow diamond shows a yellow fluorescence. This can intensify the colour. How the fluorescence impacts the price of a stone, however, must be examined on a case-by-case basis.

It is interesting to note that all chameleon diamonds are fluorescent. Champagne coloured diamonds also very often show fluorescence.

Fluorescence can appear in different colours too, from a whitish colour, to blue, to yellow.



## G - Green and Gray



When their colours are pure, both **green** and **gray** diamonds possess a cool, classic beauty. When their colours are mixed with the common secondary colours of yellow and brown, however, the diamond's overall appearance becomes much warmer. And, of course, when green and gray come together in Fancy Greenish Gray and Fancy Grayish Green diamonds, the result is especially lovely.

**Natural radiation** causes the colour **green in diamonds**. It occurs in nature when rough diamonds come in close contact with uranium or thorium during

formation.

These radioactive elements emit particles with high energy and cause defects in the crystal lattice of the diamond. If the irradiation does not penetrate deeply enough into the diamond, the rough diamond is only coloured green superficially and the green colour is then lost during the cutting process.



Only diamonds with a continuous green body colour, where the irradiation has penetrated the entire stone, still show a green colour after cutting. Regarding **gray diamonds**, one cause of colour can be deposits of boron or hydrogen atoms in the crystal lattice. These deposits cause certain wavelengths of white light to be absorbed.

Another cause can be tiny dark inclusions in the transparent diamond, like for example minute graphite concentrations of carbon.

The so-called **"Silver" diamonds**, also known as **"Salt & Pepper"** diamonds, are an affordable alternative to gray diamonds. These are colourless diamonds that appear gray due to visible inclusions.



## H - History

The name "diamond" comes from the Greek word "adamas" and means "invincible" or "indestructible." As in Greek, particularly hard materials were also referred to as adamas in classical Latin.



It is reported that the first diamonds were found in India in the **4th century BC**. However, it is believed that the first diamond discoveries actually took place in India as early as the **18th century BC**. Even then, diamonds were said to have magical effects, which is why they were also used as talismans.

Although it is impossible to determine exactly when the diamonds found in India began to spread in the West, it was not until the **13th century** that it was discovered that diamonds could be fashioned.

The valuable stones were initially transported via the Silk Road and then, starting in the **15th century**, via the Cape of Good Hope. Lisbon, Bruges, and Venice were the most important trading centers at the time.

In the **16th century**, Antwerp developed into the main trading center. About half of the world's trade took place there. Up until the 18th century, India was the only place where diamonds were found.

During the **18th century**, however, the Indian and Indonesian mines gradually became exhausted. When a Portuguese miner was searching for gold in Brazil, he discovered the first diamond outside Asia. This discovery caused a "diamond rush".

The first diamond from a kimberlite host rock was found in 1869 in Kimberley, South Africa. One year later, South Africa took over the role of main supplier, as finds in Brazil also became rarer. Since then, the majority of diamonds come from Africa. The four main producers are currently Russia, Botswana, the Congo, and Canada.

At the beginning of the **20th century** (around 1910), the brilliant cut we know today, characterized by a particularly high brilliance, was developed.

In **1955**, the first artificial diamond was produced.

**To this day**, the diamond has not lost any of its **radiance** and **attraction** and is still the **most sought-after gemstone in the world**.

## I – India



India is located in South Asia and is the **seventh largest country in the world**. The Federal Republic of India is formed by 28 states and comprises 8 union territories. The proper name of the country is the Republic of India or the Bharat Ganarajya (Hindi) in the two official languages valid throughout the country. The country's natural border in the north and northeast is formed by the Himalayas, the highest mountain range in the world. These mountains are also the source of India's longest and most important river, the Ganges (also called the Ganga).

India has always been the **traditional land of gemstones**. To date, the country has had and still has many of its own deposits, including agate, alexandrite, amazonite, aventurine, chalcedony, garnet, jasper, labradorite, ruby, sapphire, and of course ... **diamonds!** This fascinating world of gemstones permeates all spheres of Indian society, whether in religious, cultural, or social interaction. All gemstones, but especially diamonds, are considered a gift from the gods.



Nowhere else in the world is the passion for gemstones and the expectation of their auspicious properties so pronounced. Both men and women have a long tradition of wearing and showing precious stones. As a matter of fact, jewellery forms can even be seen on the wall paintings in the ancient caves of Ajanta and Ellora which date back to between the 2nd century BC and the 6th century AD.

**Over 90 percent of the diamonds sold worldwide today are cut in India**, mostly in the city of Surat. Mumbai and Surat have overtaken the traditional diamond centers of Antwerp and Tel Aviv, and the economic importance of Indian diamond traders has grown enormously. According to unofficial figures, **about 80 percent of the diamond trade is now firmly in Indian hands**. Freddy Hanard, director of the Antwerp World Diamond Center, estimates India's market share at somewhere between 60 and 70 percent.

At Kulsen & Hennig, we also travel to India regularly, bringing back many colourful treasures for you from there. We feel strongly about giving something back to this wonderful country and actively support an organisation in South India which is particularly close to our hearts:

### The **Regenboog India Foundation**:

The development projects implemented and supervised locally by the Regenboog India Foundation are supported by donations from the **Arunachala Rising Sun (ARS)** association. With love, commitment, and devotion, the team members show tireless dedication and accompany young people out of poverty into a future worth living.



[www.regenboogindia.org](http://www.regenboogindia.org)

## J - Jean Baptiste Tavernier

**Jean Baptiste Tavernier** (\* 1605 in Paris; † 1689 in Moscow) was a French merchant traveller.



Between 1628 and 1668, Jean Baptiste Tavernier undertook major journeys to the Orient, Turkey, Persia, and India. He made six journeys by land and one by ship. He became famous for his diaries, in which he documented his journeys in great detail. His most famous work, which is still published today, is *Travels to the Riches of India/Adventurous Years with the Great Mogul 1641 - 1667*.

Tavernier brought a **large quantity of diamonds** back to Europe from his travels, including twenty stones between 30 and 50 carats.

Some of the diamonds he brought back from India were later to become famous, such as the **Blue Hope diamond**, which according to legend he stole from a statue of the Hindu god Vishnu.

In 1668, Tavernier sold the Hope diamond to King Louis XIV of France. He rose in rank to become **the most respected diamond expert and dealer of his time** in the royal courts of Europe. At that time, there were no great diamonds that he had not brought back from India or at least appraised and measured for the princes.

## K - Kulsen & Hennig

Once upon a time, there was a young and big-hearted Swiss college student who worked as a ski instructor during the winter semester breaks:



That young man, who could be found skiing the Swiss Alps in the early 90s, was named Dominik Kulsen. As a motivated ski instructor for guests from all over the world, his plan was to earn enough money with this job to support himself during his sociology and economics studies. But as is often the case in life, everything turned out differently.

So, while he was hitting the slopes with all kinds of different people and enjoying the après-ski atmosphere with the other tired snow enthusiasts under the starry sky in the evenings, he got to know interesting personalities from the diamond

industry.

Impressed by his youthful commitment and cosmopolitan attitude, they took him under their wing. He was introduced to the previously unknown and equally fascinating world of diamonds.

Spurred on by his newly discovered passion, he founded his own company, **Dominik Kulsen AG**, in Switzerland in the early 1990s, specialising in Natural Fancy Coloured Diamonds. And, of course, the company has continued to prosper ever since.



But that was not the end of this fairy tale story!

At the end of the 90s, he met and fell in love with Swiss teacher, Juliane Hennig. Together, they decided to found the company **Kulsen & Hennig GbR** in Berlin, to be able to supply the European area with exclusive Natural Fancy Coloured Diamonds from there.

And if things keep going as they are, Dominik and Juliane will continue supplying exclusive Natural Fancy Coloured Diamonds to their customers for a long time to come.

## L - Loupe - Magnifying Glass



A **loupe** is one of the most important tools to have when dealing with diamonds. The evaluation of any diamond is based on **10x magnification**. The right lighting will provide contrast and is very helpful.

To "magnify" properly, clamp the diamond by the girdle with a pair of pointed tweezers. Remember to have a good light source to create contrast and place your elbows on a table for stability while focusing.

Hold the small magnifying glass (or loupe) directly in front of your eyes and place the diamond at a distance of two to three centimetres directly in front of the lens. As a rule, you should keep both eyes open while magnifying. This way you can also look into the depth of the stone. One hand, placed directly against your cheek, should hold the loupe, while the other hand holds the diamond and touches the first hand to prevent any blurring when focusing.



And what does "**loupe clean**" actually mean? Loupe clean means 'flawless or perfect'. In the case of diamonds, this means that with a diamond loupe under tenfold magnification, no impurities, or inclusions, nature's so-called fingerprints, can be seen in the stone. As almost all diamonds show inclusions, there are only a few that can be described as flawless, making them particularly valuable.

In the case of flawless diamonds, a distinction is made between diamonds with the designation "**Flawless**" (FL) and diamonds with the designation "**Internally Flawless**" (IF). Diamonds with the IF classification are 100% flawless on the inside but have slight blemishes on the surface. Flawless diamonds are flawless both internally and externally.

**The exact assessment of clarity depends on the following five factors:**

**Number of inclusions:**

The fewer inclusions a diamond has, the higher its value.

**Size of the inclusions:**

The smaller the inclusions, the better a diamond's clarity is rated.

**Position of the inclusions in the diamond:**

For example, if the inclusions are directly under the table, instead of on the side near the girdle, they are more visible. Inclusions of this type are less favourable for the rating of clarity.

**Colour of the inclusions:**

The colour of inclusions sometimes determines how conspicuous they are. Black inclusions, for example, are more conspicuous than white inclusions.

**Type of inclusions:**

A distinction is made between internal and external impurities. Diamonds with internal inclusions cannot be called flawless under any circumstances. External features do not affect the clarity.

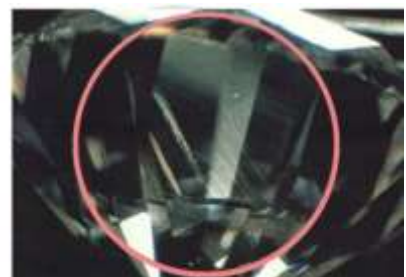
External features can be, for example, grinding marks, additional facets, natural crystal faces (naturals), or growth lines (graining).

Inclusions include all internal features that are partially or completely enclosed by the stone. These are, for example, crystalline inclusions, "clouds", cracks (e.g. cleavage and stress cracks), growth and twinning planes, and holes in the surface caused by polished inclusion crystals.

**Example of internal features:**

Some bright, "dash-like" twin lines; and to the left, two reflecting twin planes Clarity VS2

Source: *Diamanten-Fibel*  
Verena Pagel-Theisen G.G.F.G.A.



**Note:** Flawless Natural Fancy Coloured Diamonds are even rarer than flawless colourless diamonds.



## M - Mohs Hardness



There are very soft minerals like talc, which can easily be scratched with a fingernail. In addition, there are minerals with medium hardness such as opal or lapis lazuli, as well as, of course, very hard minerals such as **diamonds**, which are the hardest of all known minerals. The reason for the different hardnesses among minerals is the structure of the crystal lattice.

The term "Mohs hardness" was named after the geologist **Friedrich Mohs** (1773 to 1839). Based on the **scale of Mohs hardness**, all minerals are divided into ten different degrees of hardness.

The hardness of a mineral is indicated by its resistance when scratched with sharp-edged objects.

Minerals are ranked in ascending order of hardness from 1 to 10 (softest to hardest), and a given mineral on the scale will always scratch the preceding, softer mineral, but not the other way around. This means that a diamond (Mohs hardness 10) can, for example, leave scratches on the surface of an opal (Mohs hardness 5), but an opal will not leave scratch marks on diamond crystals. Often, imitation diamonds can be distinguished from real diamonds by the fact that their facet edges look blurred or fuzzy, and the girdle may be clearly damaged. Only the synthetic moissanite, which is often used as a diamond substitute, shows the same very sharp facet edges with a hardness of 9.25. Unlike diamonds, however, its facets show polishing stripes that all follow the same direction. Although synthetic moissanite has an even higher light refraction, it is strongly birefringent in contrast to diamonds.

### Minerals of different hardnesses are classified as follows:

**Hardness 1 to 2:** soft (*e.g. talc, silver*)

**Hardness 3 to 6:** medium-hard (*e.g. gold, turquoise, agate*)

**Hardness 7:** hard (*e.g. rock crystal, amethyst, rose quartz, tanzanite, tourmaline*)

**Hardness 8 to 10:** very hard (*minerals with gemstone hardness - e.g. beryl, emerald, ruby, diamond*)

**A Mohs hardness of 10 is only assigned to diamonds, the hardest mineral on earth. That is why the diamond can only be cut with the help of another diamond.** However, this is only possible because the hardness of the diamond is different in different crystal directions (anisotropy). This is also used, for example, when splitting and dividing rough diamonds. If you hit a cut diamond with a very hard object at an unfavourable angle, it can break, or split. Therefore, diamond jewellery should also be worn with care in everyday life.

## N - Natural Crystal Faces (Naturals)

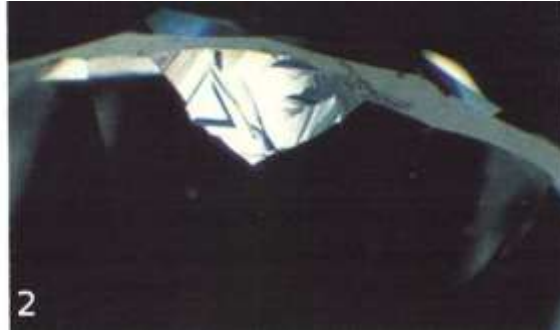


On many cut diamonds, **remains of the natural crystal surfaces of the rough diamond** can be seen. Often these are not cut away, as otherwise the diamond would lose too much weight and thus be worth less.

**Small natural crystal faces**, which mostly occur around the girdle, do not affect the clarity and, at most, might have an influence on the cut quality, but will not disturb the overall appearance and brilliance of the diamond.

**Larger natural crystal faces** that extend over several facets or extend into the interior of the stone, however, must be included in the clarity grading. In terms of size and visibility, they usually concern the SI clarity grade and less.

### Examples of naturals:



Source: Diamanten-Fibel / Verena Pagel-Theisen G.G.F.G.A.

1. A "natural" penetrating into the interior of the stone, with strong growth characteristics (SI clarity)
2. A large, natural crystal face with trigones that have penetrated into the stone's interior (SI clarity)

## O - Orange

Diamonds with a pure orange colour are very rare in nature. Orange diamonds with yellow and/or brown secondary colours are more common, especially in "Deep" shades. Yellow as a secondary colour gives the stone a bright colour, whereas brown creates a deeper hue. Pink and red secondary colours are much rarer.



The most famous orange diamond is known as the "**Pumpkin Diamond**". Although at "only" 5.54 ct it may seem relatively small compared to other well-known diamonds, it is in fact the largest diamond in the world ever to receive a "Fancy Vivid Orange" grading by the GIA. What makes it especially unique is its bright and, at the same time, intense, colour and the total absence of any secondary colours.

Found in the Central African Republic with a rough weight of 11.00 ct, it was later cut by William Goldberg. On 30 October 1997, it was finally bought by Harry

Winston at a Sotheby's auction for 1.3 million dollars.

Since then, its value has increased many times over. Winston had the diamond set in a ring with two crescent-shaped white diamonds flanking it on either side. The extraordinary diamond gained international fame when Halle Berry wore the beautiful orange diamond ring at the 74th Academy Awards in 2002. There, she delivered her speech as the first African American woman to win an Oscar for Best Actress.

To this day, the picture of her holding her Oscar with the orange diamond ring sparkling on her pinkie finger is known the world over. A year later, the diamond was removed from its setting and displayed in the Smithsonian's "The Splendor of Diamonds" exhibition.

### Colour Cause and Origin:



Radiant: Fancy Deep  
Brownish Yellowish Orange

The main cause of colour in orange diamonds is the presence of nitrogen atoms in the crystal lattice. There is a distinction between the Type Ia diamond with nitrogen atoms in groups and the rarer Type Ib, in which a nitrogen atom replaces a carbon atom in the crystal lattice. Most orange coloured diamonds come from Africa, with particularly exceptional stones having been found especially in Sierra Leone in the Zimi mine. Other deposits have also been found in Russia, Brazil, and Australia.

Orangefarbene Diamanten / Orange Diamonds / Diamants orange



## P - Pink



**Pink coloured diamonds** are as sought after as they are rare.

A diamond is called pink when red, purple, and orange colours combine. So, although pink is really more a blend of these colours than an actual colour in its own right, the term is commonly used to describe any colour that appears "pink" to the eye.

From "Light Pink" to "Fancy Vivid Pink", all colour intensities can occur. In the unusual case of an even higher intensity and colour depth, the diamond colour "Fancy Deep Pink" becomes "Fancy Red". As this has only been the case in a handful of mined diamonds, red remains the rarest diamond colour in the world.

Pink diamonds owe their appearance to a **distortion in the diamond's crystal lattice**. A shift in the lattice planes occurs under great pressure and heat after the diamond is formed. In many pink and brown diamonds (primarily from the now closed Argyle mine), a grain produced by this irregularity can be observed under tenfold magnification. These shadow-like lines, also called graining, can be visible on the surface or inside the diamond.



### Exciting Find - The Lulo Rose

In Angola, miners have discovered a record-breaking pink diamond. It is the largest pink diamond found in 300 years. Although the 170.00 carat stone still needs to be cut to reach its full value, it is expected to fetch several million dollars when it is auctioned.

The find is a Type IIa diamond - this category includes particularly rare and pure stones.



Photo: AP

Similar pink diamonds have achieved record prices in the past. The current record is held by the 59.60 carat "Pink Star" diamond, auctioned in 2017 in Hong Kong for 71.2 million dollars (equivalent to 66.7 million euros at the time).

Kulsen & Hennig (Germany)

Dominik Kulsen (Switzerland)

Pinkfarbene Diamanten / Pink Diamonds / Diamants roses



Naturfarbene Diamanten | Natural Fancy Coloured Diamonds | Diamants de Couleur Naturelle

## Q - Quality



At Kulsen & Hennig and Dominik Kulsen AG, we place great emphasis on quality. We are known and appreciated by our customers for this. We strongly believe that our stones should be both beautiful and of the highest quality. The **following characteristics** receive special attention from us:

### Colour:

Our top priority is of course a stone's colour! Diamonds are the gemstone with the widest colour spectrum, and this most precious of all gemstones does not only occur in pure colours, such as Fancy Yellow and Fancy Green, but also in so-called mixed colours. This can result in so many colour combinations and shades that one stone is rarely ever the same as another. We are committed to finding the brightest, most beautiful colours and colour blends in stones that shine and never appear dull.

### Cut:

A well-executed and symmetrical cut is essential in not only colourless diamonds, but also in Natural Fancy Coloured Diamonds. If a diamond isn't cut well, it won't develop its famous brilliance or show its colour. An incorrect cut leads to a "dead" diamond. The right cut is not only important for larger single stones, but also for small goods. Even with one point stones, a "dead" or incorrectly cut diamond would disturb the overall impression of a piece of jewellery. Therefore, all stones, no matter how small, must meet the quality standard for a correct cut.

### Clarity:

For Natural Fancy Coloured Diamonds, clarity is important, but it is not the first priority, as is often the case with colourless diamonds. In the case of diamonds with high colour intensity, especially, small inclusions will not detract from the stones' appearance. It is important, however, that there be no tension in the stone so that the diamond does not crack due to the stress when set or worn.

Ultimately, it is the **overall impression** of the stone that determines whether or not it meets our high quality standards. It is important that the colour, cut, clarity and brilliance create a harmonious combination that makes the stone something special. Diamonds captivate with their particularly graceful appearance and their unsurpassed elegance. To achieve this high degree of beauty, everything simply must be right!

## R - Red



In the section on "Pink", we touched briefly on the exciting topic of "Red Diamonds". A pink diamond with sufficient colour intensity becomes a red diamond. Since this happens extremely rarely in nature, only a handful of these special stones have been found so far. This makes red - as already mentioned - the rarest diamond colour in the world!

**The most expensive and largest red diamond** in the world is **the Moussaieff Red Diamond**.

The discovery of this red diamond dates back about a quarter of a century. In the 1990s, the stone was discovered by chance by a farmer in a river in eastern Brazil. When it was found, the uncut diamond weighed 13.90 ct. Later cut into a "Triangular Brilliant" shape, the red gemstone now weighs 5.11 ct.



The Moussaieff diamond is remarkable not only for its weight, but also for its extremely rare colour, a pure "**Fancy Red**", with no tinge of brown, yellow or purple. Another factor that contributes to the value of this red diamond is its clarity, graded by the GIA as "Internally Flawless" (IF). This rating is awarded to diamonds that show no internal flaws even when magnified 10 times.

The red diamond has been known as the **Moussaieff Red Diamond** since 2001, when the jeweller **Shlomo Moussaieff** acquired the stone for an estimated **8 million US dollars**.

## S - Sortoscope



The **Sortoscope** is, right after our magnifying glass, diamond tweezers and the right light, our most important working tool.

This indispensable tool is a sort of **microscope with multiple magnification** which we use **to individually examine the quality of each diamond before purchase** from our suppliers. This applies all of our stones, from the very smallest to largest.

The advantage of this microscope is that it illuminates the diamond from both above and below. This ensures that we do not miss any inclusions, natural imperfections, or cracks in the stone. At the same time, the diamond can be checked for the quality of its cut, polish, and symmetry.

A support rail is moved through the device, making it easy to line up the stones, no matter how small, and check them all individually, one after the other. This way, we are sure to select for you only those stones that meet our high quality standards in terms of colour, cut, and clarity. Of course, this is a very time-consuming process, but we think it is worth it!

Of the many small stones we look at with the help of the Sortoscope, only **less than 10 per cent** make it into our inventory.



## T - Top Light Brown (TLB)



**Champagne coloured** diamonds are always a classic among Natural Fancy Coloured Diamonds and are extremely versatile. When trying to describe the various shades of these diamonds, some imaginative comparisons come to mind, including everything from honey to cinnamon and caramel, to cognac and chocolate.

To facilitate dealings with champagne-coloured diamonds, the now-closed Argyle mine developed a system called The Champagne Coloured Diamond Colour Scale. The colour scale consists of seven grades, ranging from C1 (light champagne) to C7 (dark cognac).

But what about diamonds that are lighter than C1/C2? Technically, these stones are considered colourless diamonds.

*As a reminder, the grading scale for colourless diamonds ranges from the top quality colour "D" (colourless) to the visibly tinted shade "Z".*

Diamonds that are lighter than C1/C2 but still possess a recognisable colour are assigned letter grades from K to Z according to the officially recognised GIA colour scale for colourless diamonds.



**Faint Brown** : letters **K** to **M**

**Very Light Brown** : letters **N** to **R**

**Light Brown** : letters **S** to **Z**



In addition to this colour scale, diamonds within these colour designations are also often referred to in international trade as **Off White Light Brown (OWLB)**, **Top Top Light Brown (TTLB)** and **Top Light Brown (TLB)**.

The special advantage of the colours Top Top Light Brown and Top Light Brown is that they are very subtle, yet elegant. Especially when set in red, rose, or yellow gold, these colours ensure that a particularly soft and harmonious contrast is created between the precious metal and the diamond.

*Note:* Although the colours of diamonds are evaluated in a laboratory with technical aids and with comparison stones, in the end, the human eye decides which colour grade a given stone receives. The nuances are so subtle that there may well be small overlaps or differences in colour perception. Even when viewed "at home", different colour impressions can occur depending on the light and the type the day.

## U - UV Light and Diamonds

**What Is UV Light Anyway?**



UV light stands for **ultraviolet light** and is a type of electromagnetic radiation that is invisible to the human eye and that has a higher energy than visible light. UV light is emitted by the sun and can also be produced by artificial light sources, such as UV lamps.

## What Does This Have to Do with Diamonds?

Some gemstones (including diamonds) can fluoresce under UV light, which means that they show a different colour or brightness under UV light than under normal light. Diamonds, for example, often glow blue under UV light, but other colours such as yellow, green or violet can also occur.



### *Notes on fluorescence in coloured diamonds:*

Chameleon diamonds all have high fluorescence.

With yellow diamonds, for example, a yellow fluorescence can actually enhance the stone's colour, making it appear more intense.

Fluorescence occurs when gemstones contain certain chemical elements or impurities that react to UV radiation. When UV light hits the stone, some of the light's energy is absorbed by the atoms in the gemstone and re-emitted in the form of visible light. This causes the gemstone to show a different colour under UV light than under normal light. The type and intensity of fluorescence depends on the type of gemstone and the type of impurities. Some gemstones fluoresce very strongly under UV light, while others show only weak fluorescence or do not fluoresce at all.

## Examples of Diamonds with Different Degrees of Fluorescence:



Photo: [essiluxgroup.com](http://essiluxgroup.com)

Photo: [gia.edu](http://gia.edu)

## V - Vivid



Reminder: Natural Fancy Coloured Diamonds occur in nature in a wide variety of colours.

The colour of a Natural Fancy Coloured Diamond is described, on the one hand, by the **hue** and, on the other hand, by the **colour intensity**.

**The hue** describes the property by which one distinguishes colour sensations such as Fancy Pink, Fancy Yellow, or Fancy Green.

**The intensity** level of the colour can range from very light to very strong. The stronger the intensity, the higher the value of the diamond.

The GIA has developed an intensity grading scale for this purpose to categorise the intensity grades:

Delicately coloured diamonds that fall under the following three categories still count as colourless diamonds, as the colour is quite faint and can only be seen on closer inspection:

Weak (Faint)  
Very Light  
Light

From this point on, diamonds are considered "coloured" because the colour is visible at a glance and have earned the prefix "Fancy":

Fancy Light  
Fancy  
Fancy Intense  
Fancy Deep or Fancy Dark  
Fancy Vivid

### Colour Intensities Using the Example of Yellow Diamonds:



### Fancy Vivid

The term "**Fancy Vivid**" describes the **highest degree of colour intensity** that diamonds can have, meaning the colour is **brilliant, bright, and vibrant**. Diamonds with this colour designation are particularly rare and correspondingly valuable. The colour of such a diamond is unmistakable. It doesn't get any better than that!



## W - White Doesn't Mean Colourless



White diamonds are beautiful, almost opaque diamonds that have a milky appearance. Because of this feature, they are often called "**Milky Diamonds**" in the trade. Unfortunately, the term "white diamonds" is often mistakenly used for transparent, colourless diamonds, but this is not correct. White diamonds are milky white, while the classic colourless diamonds show no colour at all.

In other coloured diamonds, the colour is caused by trace elements, such as nitrogen or boron, but the colour in white diamonds (i.e., "**milky diamonds**") is caused by a high number of tiny inclusions that scatter the light. So, in fact, white diamonds are basically colourless diamonds with many, many, very small inclusions that create their typical frosty, "milky" white colour.

Since white is not actually a colour, however, these diamonds are not judged by their degree of saturation like their coloured siblings but are always referred to as "Fancy White".



## X to Z - Not Quite "Fancy"



Colourless diamonds do not always have the same colour quality and intensity. Within the category of colourless diamonds, stones can range in colour from being completely colourless to possessing light shades of yellow or brown. To ensure consistent and accurate colour grading, the Gemological Institute of America (GIA) has developed a colour grading system for the commercial determination of colour grade that has become the international standard.

In this colour scale, the colour grades are divided alphabetically from D (absence of colour) to Z (light yellow or brownish). Although diamonds in other rarer colours such as pink and blue can also occur in very faint intensities, they are treated separately from the yellow range.

D / E / F : Colorless

G / H / I / J : Near Colorless

K / L / M : Faint

N / O / P / Q / R : Very Light

S / T / U / V / W / X / Y / Z : Light



**Example:**

The yellow colour of the diamond shown here is visible, but still quite faint. That is why it is still officially a colourless diamond and would therefore receive the colour grade of **X**, **Y**, or **Z**. In the trade, this diamond's colour would be referred to as "**Light Yellow**".



Although diamonds with colour grades from **X** to **Z** are still colourless diamonds, they already have a subtle, yet visible, coloured shimmer. They bring an excellent element of style and blend delicately and elegantly into any piece of jewellery. In addition, they offer a definite price advantage when compared to both completely colourless diamonds and those possessing a very distinct colour.

**The colour grade Z marks the end of the official colour scale for colourless diamonds. From that point on, diamonds show a clearly recognisable colour and receive the prefix "Fancy".**

Example: The diamond on the right shows a stronger and clearly visible yellow colour in comparison and is graded "**Fancy Yellow**".

